REMARKS/ARGUMENTS

Claims 1-9 are pending in the present application. Claim 1 has been objected to due to informalities. The Applicant has amended the claim and believes this objection has been overcome. Claims 1-4 and 7-9 have been rejected as being unpatentable over McCormick (U.S. Patent No. 5,012,722) and in view of Takano et al. (U.S. Patent No 5,938, 947) and further in view of Melanson (U.S. Pat. No. 6,727,832). Claims 5 and 6 have been rejected as being unpatentable over McCormick and in view of Bergstrom (U.S. Patent No. 6,249,418). In response, Applicant has amended independent claims 1, 8, 9, dependent claim 7 and added new claim 10. The amendment is fully supported by the original disclosure. No new matter has been introduced. Applicant reasserts previous arguments and believes all claims are in allowable form. Consequently, Applicant respectfully requests allowance of such claims.

Claims 1-4 and 7-9 have been rejected as being unpatentable over McCormick (U.S. Patent No. 5,012,722) and in view of Takano et al. (U.S. Patent No 5,938, 947) and further in view of Melanson (U.S. Pat. No. 6,727,832). Claims 1, 8 and 9 have been amended to require in part, calculating or sampling "within one pulse width modulator cycle." (Emphasis added). This amendment finds its antecedent basis in the original disclosure, under the Detailed Description of the Invention, page 3, wherein it states, "[i]n the digitizing device 16 the signal 14 is sampled at a rate high enough so that *multiple samples per PWM period*, or a plurality of samples, are taken", and later in that paragraph wherein it states, "[t]his yield, the average value of the current within <u>one</u> cycle 10". (Emphasis added).

McCormick does not teach this limitation and instead teaches that "all the feedback devices can be sampled and the

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position of the electrohydraulic valve 11 can be accordingly adjusted approximately once every 1 ms." (Col. 7 Lines 58-61). Nowhere does McCormick expressly teach the sampling or calculating of a signal "*within one pulse width modulator cycle*."

Takano does not cure McCormick, as Takano also does not teach the sampling or calculating of a signal "*within one pulse width modulator cycle*." Although, Takano discusses the method in which an average value is calculated (Col. 6 Line 22 – Col. 8 Line 38) nowhere in the specification does Takano teach the limitation of sampling or calculating of a signal "*within one pulse width modulator cycle*."

Additionally, the Examiner uses Melanson to provide motivation to combine the McCormick and Takano references. First, applicant disagrees that there is a motivation to combine these references, and second at the very least Melanson has not been used to cure McCormick and thus is not used to show each and every limitation is present in the claims. Thus the Examiner has not shown each and every limitation of amended claims 1, 8 and 9 is present to meet a *prima facie* case of obviousness. Consequently, Applicant believes claims 1, 8 and 9 are in allowable form and respectfully requests allowance of such claims. Additionally, dependent claims 2-7 and 10 depend on claim 1 and for at least this reason are also considered in allowable form.

Claim 7 has been amended to include "such that the method of driving the coil of an electrohydraulic valve with a pulse width modulator drive starts over again for a next pulse width modulator cycle". This amendment finds support in the original specification, page 3, wherein it stats "[t]his result is passed to the closed loop control algorithm 20 via signal 18 to

determine the pulse width of the <u>next cycle</u> 10 via pulse width

signal 22. The accumulator is reset to zero and the cycle

starts over again". (Emphasis added). Therefore this amendment

is fully supported by the original disclosure.

This Amendment was made in part to emphasize that

Applicant's invention controls the current in the coil, by

sampling and calculating, within <u>one</u> pulse with modulator cycle.

(See page 3 of the original specification.) Therefore,

Applicant's invention controls the coil with minimum lag, and a

quick response time. As stated above nowhere does McCormick nor

Takano teach this limitation. Therefore, Applicant respectfully

requests allowance of this claim.

Claim 10 is new. Claim 10 adds the limitation "wherein the

digitizing device is a finite impulse response filter" to claim

1. This amendment is fully supported by the original

specification, page 3, wherein it states "the digitizing device

with accumulator 16, or finite impulse response filter".

Applicant asserts that because claim 10 is dependent on

independent claim 1 that for at least this reason should be

considered allowable subject matter. Similarly claims 2-7 also

depend on claim 1 and for this reason are considered allowable
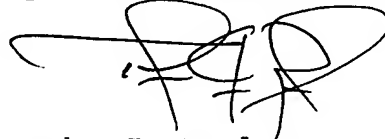
subject matter.

CONCLUSION

If any issues remain that may be expeditiously addressed in

a telephone interview, the Examiner is encouraged to telephone

the undersigned at 515/558-0200.

No fees or extensions of time are believed to be due in

connection with this response. However, consider this a request

for any fee or extension inadvertently omitted, and charge any

additional fees to Deposit Account 50-2098.

                              Respectfully submitted,

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